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# News & Views



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A Newsletter Dedicated to Information Technology in the State of Montana

## MT PRRIME Gets Legislative Nod

MT PRRIME (the Project to Reengineer the Revenue and Information Management Environment) has met with initial legislative approval. As of this writing (March 12), the proposal has received unanimous approval from the House Long Range Planning Committee. If approved by the legislature, the project would replace our existing core business systems with state-of-the-art commercial software; a giant "Quicken" for state government, if you will. In addition, the project would initiate a central revenue collection center in the Department of Revenue.



Why is visioning necessary? First, it allows us to identify the benefits which can be derived by reengineering these processes. Second, the vision of how these processes *should* work will help drive our procurement process. Finally, visioning allows us to tap the knowledge of key state personnel to make our processes more efficient. In addressing this group, Governor Racicot recently wrote, "There are numerous requirements for a successful software installation of the scope envisioned by MT PRRIME. The most important requirement is active and meaningful involvement by state employees. We need to leverage your knowledge of our core business processes to take advantage of the efficiencies available with new technology."

## Visioning Studies Underway

Deloitte and Touche Consulting Group is currently assisting the State with visioning several key business processes. Three visioning subcommittees are reviewing these processes:

- 1) Payroll and Benefits, chaired by Mark Cress
- 2) Budgeting, chaired by Bill Salisbury
- 3) Purchasing and Accounts Payable, co-chaired by Connie Griffith and Marv Eicholtz

These processes were chosen for scrutiny primarily because they've been identified as having great potential for improvement.

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Starting February 3rd, and continuing until early April, Deloitte and Touche consultants and state personnel will be working full time gathering information and assisting the Visioning Subcommittees in the development of their process visions. They may have visited your offices already. If you have questions or suggestions, contact Mark, Mary, Connie, or Bill, or call the Project Team at MT PRRIME Visioning Headquarters, extension #7623.

## RFP Development Has Begun

The MT PRRIME Steering Committee has begun development of the RFP which will be released toward the end of April, contingent on legislative approval. The RFP will provide a detailed list of the types of software support we need, but not a 'laundry list' of required functionality. Part of the evaluation process will include scripted demonstrations which will allow us to contrast the differences between existing (PPP, SBAS, PAMS, etc) and future systems. After qualifying vendors, we will visit public sector sites where their software is installed. This is a time consuming but interesting process, and one which will give us the opportunity to fully review the proposed systems.

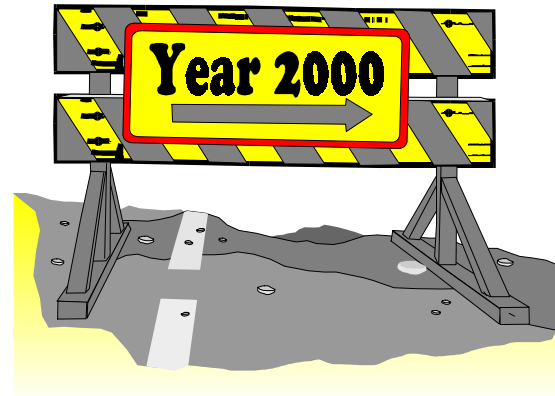
For more information contact Dave Ashley at 444-2032 or Ed Glenn of the ISD Systems Support Bureau at 444-2916, ZIP!, or E-Mail at [eglenn@mt.gov](mailto:eglenn@mt.gov).

# Year 2000 Software Tools

The major advantages in using Year 2000 software tools are that they substantially reduce the time required to complete certain Year 2000 project tasks, and they provide an assurance of accuracy that is not readily matched if done manually. Many of today's Year 2000 software tools are the result of enhancements to maintenance tools that have been in the marketplace for a number of years.

The general categories of Year 2000 tools include:

- ☐ Inventory
- ☐ Impact Analysis
- ☐ Conversion
- ☐ Testing
- ☐ Miscellaneous



## Inventory

Inventory tools can substantially reduce the time required to complete this task and they also guarantee a thoroughness and accuracy that are vital to the remainder of the process. A software product that is missed during the inventory process could be potentially disastrous if it remains undiscovered throughout the project.

There are inventory tools for all software environments that exist in an organization. Some function within a narrow spectrum, for example, system software or load module libraries only, while others are more comprehensive (source and load libraries and JCL).

## Calendar of Events

**April 5**

**Information Technology Managers Group (ITMG)**  
8:30- 10:30 am, Rm 111, Metcalf Building

**April 20**

**Public Safety Communications Task Force (PSCTF)**  
1:00-4:00 pm, Helena location TBA

**Note:**

**The Information Technology Advisory Council (ITAC) is not scheduled to meet until April 1997**

**Information Technology Managers Group (ITMG)**  
**April 5, 8:30-10:30am, Room 111, Metcalf building**

The purpose of this type of tool is to quantify the extent of the date problem in application systems. This information becomes the basis for formulating compliance strategies and developing a work plan to implement the required changes.

The more basic impact analysis tools search source code for character strings that might be indicative of date fields (e.g. YY, year, date). This is often an iterative process because the initial run will lead to the discovery of some date fields with no obvious date reference in the field name (e.g. BR-549), as well as some "false positives" (a search for "date" selects "update" as well).

Additional functionality that is found in the more sophisticated products include parsing and data flow analysis. These products attempt to interpret date references via their usage in a program and schematically trace the flow and operations performed on all date fields.

## Conversion

Conversion tools automate the physical expansion of files/databases to include 4-digit years and/or the insertion of windowing logic into application programs. There is significant variability in the degree of automation of procedural (windowing) tools. Some tools will only display the program code line containing a date reference. The user can then manually type in whatever change is desired. More sophisticated tools provide for the automatic insertion of pre-defined windowing macros into the program logic.

## Testing

This is one tools area where products that have existed for years provide the functionality needed for Year 2000 testing. These include tools that provide for test data generation, file comparisons, interactive debugging, and date simulation.

## Miscellaneous Tools (source recovery)

It is generally the circumstance in large organizations that there are a few production programs for which

no source code currently exists. The Source Recovery Company offers a service whereby they re-create source code from the load module. This product works for COBOL source, COPY books, Assembler, and CICS maps. Use of this product/service does not result in the 100% verbatim re-creation of the original code but is an appealing solution if the alternative is re-writing the program from scratch.

## Tool Selection Considerations

Some considerations when evaluating tools include the following:

- ☐ **What is the hardware platform on which the tool runs?** If it's the same as the application execution platform, the advantages are faster processing and ease of data access and iterative testing. If the tool platform is different than the execution platform (e.g. the tool runs on the PC, while the application runs on the mainframe), the advantages are that you're not paying for mainframe CPU time and it may have a better user interface (e.g. GUI). In the example cited, the disadvantages would be slower processing and the inconvenience of having to download data.
- ☐ **Is there any prerequisite software that the tool requires?** For example, the COBOL Analyst 2000 inventory tool requires MS Access for reporting.
- ☐ **What development environments does the tool support?** Most tools are not exhaustive in their support of programming languages. For tools offering "limited" support of specific languages, make sure the limitations are known and acceptable.
- ☐ **What is the ability of the tool to either import data from an upstream tool or export data into a downstream tool?**
- ☐ **What are the resource requirements to install and execute the tool?**
- ☐ **What is the learning curve in becoming proficient in using the tool?**
- ☐ **What information/reports are generated and how useful are they?**
- ☐ **Is there a requirement that the tool is packaged with consulting services?**

The vast majority of commercially available Year 2000 tools are for mainframe application

environments (COBOL, PL/1, CICS, IMS). Tools for PC/LAN-based development environments are often packaged with a requirement that the vendor provides the service of running your code through their software. Be wary of tools that have this "package" requirement, it can be an indication that the product is not entirely "bug-free" or ready for a production environment.

Remember that no single tool provides a complete solution and most importantly, *NO TOOL IS A SILVER BULLET SOLUTION*. Tools can improve productivity through improved accuracy, speed, and completeness, but all tools still require a manual validation effort.

For more information contact Dan Sidor of the Year 2000 Project Team and ISD's Policy, Development and Customer Relations Bureau at 444-2029, ZIP!, or E-Mail at dsidor@mt.gov.

A detailed explanation of TICTOC in BATCH, CICS, and with XPEDITER can be found in MVS QuickRef. In ISPF just enter "QW TICTOC" on the command line to display the text or, from the MVS QuickRef Main Menu select Item TICTOC from within Topic "T".

For more information contact Glenn Stroop of the Systems Support Bureau at 444-2910, ZIP!, or E-Mail at gstroop@mt.gov.

## Disaster Recovery Planning

*What is a disaster?* A disaster occurs when damage is severe enough to render normal data processing



capability inadequate or incapable. Disasters come in many forms and levels of severity. They may be

## Year 2000 Testing

ISD just acquired TICTOC from ISOGON Corporation. TICTOC software allows you to run different jobs and applications with different "virtual" dates and times. On a job-by-job basis, you can specify what date the "system date" will be when the job requests "date" information. This lets you test how programs will run in the future, for example on January 1, 2000, without affecting other jobs running at the same time and without requiring operator intervention.

Use TICTOC to test a job by adding a few JCL statements to your batch job. Specify the virtual date with: VIRTDATE=2000/01/01

Use TICTOC to test your CICS transactions by entering the Transaction ID you want to test and the "virtual" date in the TICTOC Primary Option Menu.

Some software products have expiration dates that don't allow the software to execute after a set date. One of these products is Finalist, the address certification software from Pitney Bowes. If you attempt to use TICTOC with Finalist it will abend with a message indicating that the product has expired.



natural, technological or civil (human) in nature; they may be short-term or long-term; and they may be local, regional, national or global in scope.

*Why and how do we plan for disasters?* Careful planning and preparation are essential to successfully respond to, and recover from, a disaster. Business Continuity Planning is the first step and it involves the development and testing of plans to ensure team and recovery services to customers, both internally and externally. Business Continuity Planning is made up of three elements; risk assessment, crisis management and contingency management. **Risk assessment** is the formal process of identifying and evaluating risks, critical functions and priorities of those functions, skills, activities, time frames, and resources necessary to ensure business continuity. **Crisis management** is planning for the survival of the business unit, team and organization as a whole. Its goal is to prevent loss of life, reduce injuries and minimize property damage. **Contingency management** is planning recovery and continuation of customer critical business functions following a service interruption. Its focus is to recover services that support critical customer functions first, and then return to normal procedures as soon as possible following a disaster.

During the months of February and March ISD Disaster Recovery Coordinators have been meeting with agency disaster recovery representatives and Disaster Emergency Services (DES) coordinators to facilitate disaster planning. Agencies have been provided with templates and supporting materials to aid them in the development of their specific backup and recovery needs. Each agency is encouraged to develop a disaster recovery plan for their IT environment to include: a) risk assessment; b) crisis management plan; c) contingency management plan (specific data center recovery needs); and d) overall business continuity

plan. The current focus is on initial contingency management plans for a variety of disaster scenarios. Agency plans will be coordinated with ISD's and DES's plans to ensure smooth execution following a major disaster.

Thanks go out to each agency for their attention and participation in these disaster recovery planning efforts.

For those agencies who have not yet been scheduled for training in plan development, or who have not provided a disaster recovery contact person, please contact these Computing Policy & Development Section staff: Leslie Cummings at 444-2469, ZIP!, or E-Mail at [lcummings@mt.gov](mailto:lcummings@mt.gov); or Brett Boutin at 444-0515, ZIP!, or E-Mail at [bboutin@mt.gov](mailto:bboutin@mt.gov).

## METNET Goes to Court!

Three recent legal proceedings have been successfully handled by using METNET video! On February 25, 1997, the METNET system was used by the Montana District Court to accept a plea of guilty to two counts

of mitigated deliberate homicide from a patient, accompanied by her attorney, at Warm Springs State Hospital via video conferencing. The plea was entered by the patient at the Warm Springs METNET site before District Judge Jeffrey Sherlock, presiding from a temporary courtroom at the Helena College of Technology



METNET site. According to her doctor, the defendant was in no condition to be transported to either Townsend or Helena to make her plea. Without METNET, the situation would have been costly or nearly impossible. The transportation costs for the defendant alone would have exceeded \$500 more than the video conference.

Recently, the Lewis & Clark County Attorney's office used the system on two separate occasions. The first involved a witness in Fort Worth, Texas and a defendant in Choteau, Montana. Several attempts to set a trial date failed when last-minute scheduling conflicts appeared from one of the parties. The County Attorney's office turned to video conferencing. Three systems were connected: Sprint Video Network for the witness in Fort Worth, Texas, REACH Telemedicine Network for the defendant in Choteau, Montana and METNET Interactive Video for the Deputy County Attorney and Crime Victims Assistant in Helena. The County Attorney's staff officiated at the video conference from the Helena College of Technology site. The resulting video tape of the entire proceeding was played for a jury during the trial later that week. The estimated cost savings exceeds \$1300.

The second use by the Lewis & Clark County Attorney's office involved an emergency room physician in Butte who identified pictures shown over the graphics camera from the Deputy County Attorney in Helena. Again, the end result was a video tape to play for the jury in an upcoming trial. The County Attorney's office estimated that this video method of testimony saved the taxpayers in excess of \$300.

Interactive video is proving itself useful and cost effective in saving Montana taxpayers over \$2100 in just these three instances.

For more information contact Dennis Mix of the Telecommunications Bureau at 444-7887, ZIP!, or E-Mail at [dmix@mt.gov](mailto:dmix@mt.gov).

## Doing "IT" Right New Publication Available

*Doing "IT" Right* is a guide to properly using and protecting Montana's Information Technology resources. The guide was developed by the Training Subcommittee of the Information Technology

Managers Group, with input from the NetWare Managers Group.

The guide discusses the responsibility of state employees regarding information technology—the "IT" in the title. IT is defined not only as hardware and software resources, but also the data created or generated by IT processes. Readers will learn proper, secure and legal use of the state's IT resources.

Some of topics discussed are: unauthorized access, unlawful use of a computer, security, care of data, virus scanning, software licensing, passwords and state standards. The appendices contain pertinent sections of Montana code for reference as well. Suggestions for future generations of the publication are welcome. Contact Wendy Wheeler of ISD's Customer Relations Section at 444-2856, ZIP!, or E-Mail at [wwheeler@mt.gov](mailto:wwheeler@mt.gov). For copies, please contact the ISD Administrative Office at 444-2700.

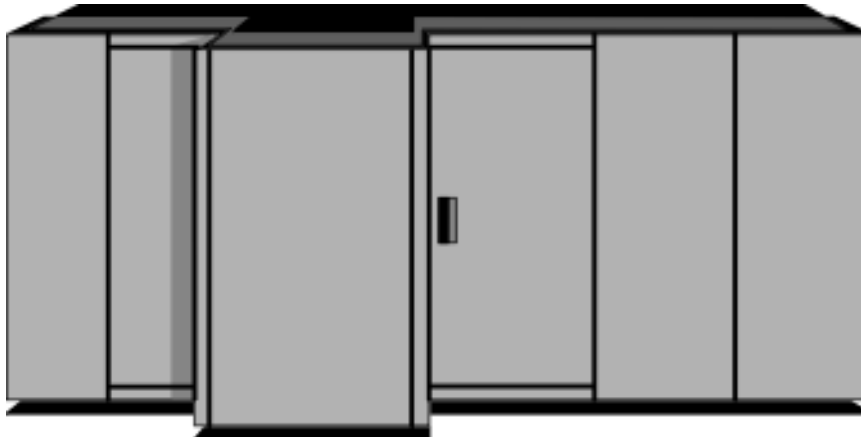
## Charges for Manual Job Scheduling

Last Spring and Summer, twelve classes were conducted to train approximately 150 programmers, I/O technicians, and systems specialists on the ins and outs of Control-M and Control-R. These are the scheduling and rerun/restart applications for batch processing on the mainframe. All of our customers who have availed themselves of this product have been very pleased with performance, throughput, reliability and convenience. All are experiencing shorter run times for their complex schedules, instant notification of errors and problems, and a single interface to locate problems and deal with solutions. In July 1996, the first customer controlled and defined application, CAPS, was activated on the job scheduler and ran in production mode. Convenience, increased productivity, and reliability have been the driving forces behind the increasing utilization of the job scheduler. The new driving force to convert your production processing to the job scheduler is saving money. **Money** is that five letter word that, when mentioned, usually means you have to dig deeper into empty pockets to pay more for something. Guess what! The meaning hasn't changed. However there is an out.

ISD has always had a charge for I/O control services of \$20.00 per hour. That rate applies to customers who requested ISD to assume the responsibility to submit, monitor, and check the output of their job streams. For jobs to be processed during the off shifts, we have many customers who submit their jobs and provide us a schedule to follow. We then release these jobs in the stated sequence, monitor them, and check if the output of these jobs to ensure normal completion of all jobs on that schedule. If necessary, we call in support personnel to resolve problems. Although this manual scheduling service falls within the \$20.00 an hour I/O control service, to date, we have not charged for it. Prior to the implementation of the job scheduler, we were not able to provide this service any other way and it would be a hardship on customers to staff additional shifts just so they could monitor their own jobs through the night.

The success we have experienced with the job scheduler and the fact that it can do all the I/O controller functions we have done manually, at machine speed (180 million instructions a second), has prompted us to begin applying the I/O control services rate for the off shifts. This policy change will take effect July 1, 1997. We will charge all customers still on a manual schedule system the \$20.00 fee. This fee will be charged for wall time, for any and all time we manually monitor a job or job stream, with a one hour minimum charge. For example, if your processing runs for about an hour or less, five days a week, your approximate annual cost is \$5,000. Do you have a job stream that's running a little longer than that? Let's look at a job stream which typically begins running at 5:30 pm each evening and doesn't conclude until 9:30 pm Monday through Friday. Whoa! You're looking at a \$20,000 annually. Keep in mind, this fee is in addition to the computer processing costs for the jobs.

Frankly, we don't want to collect this fee. We don't want you to pay this fee. We want you to get your production schedules on the job scheduler thereby avoiding this fee. To accomplish this goal, we will



offer additional classes to teach you how to use the job scheduler and we will work with you on a one-to-one basis to assist you in converting your schedule.

The job scheduler class requires two days and is conducted at the U of M Helena College of Technology's facility. There will be two classes presented in April. The dates of these classes are April 16-17 and April 24-25. Classes begin at

8:30 am and run till 4:30 pm each day. There is no fee for the class and instruction materials are provided. In addition, personnel from ISD are available to assist you in converting your current manual production schedules to the automated job scheduler and will work with you in any way we can to help you take advantage of this tool. We strongly recommend that you attend the class if at all possible.

If you have questions or if you would like to register for one of the classes, contact Mike Krings of the Computing Operations Bureau at 444-1815, ZIP!, or E-Mail at [mkrings@mt.gov](mailto:mkrings@mt.gov). You will need to provide your name, phone extension, LOGONID, and request which class you wish to attend. Even if you cannot attend one of these classes but have production schedules to convert, please contact Mike.

## Mid-tier Security

The security philosophy for any information system must embrace the three fundamental elements of confidentiality, integrity, and availability. It is the intention of ISD that these issues be addressed and maintained in the Mid-tier environment just as they are in the mainframe and network environments.

The Department of Administration, Information Services Division is responsible for centralized management and coordination of state policies for security of data and information technology resources and shall:

- (a) Establish and maintain the minimum security standards and policies to implement the department responsibilities, including physical

security of central computer facilities.

- (b) Establish standards and guidelines to assist agencies in carrying out their responsibility to assure adequate security for all data and information technology resources.

The mid-tier hardware which ISD supports will reside in the same secure environment as the mainframe system. That environment has controlled physical access, 24 hour x 7 day operational support, controlled atmosphere, and constant UPS (Uninterruptible Power Supply) backup plus daily data backup.

When purchasing 'off the shelf' Oracle database application software, a qualified Oracle DBA should be included on the review committee to determine if the software conforms to State of Montana security standards and policies.

Any application to be developed and run on a production server must first be reviewed with the SDS section of Database Administration. Oracle database objects ownership and responsibilities will be defined before development begins. Oracle application developers must work closely with the DBAs to insure a secure application design using Oracle's privilege, role, profile, and audit capabilities.

Single Account databases will not be allowed. That is, everyone logging on or using an Oracle database must have, and use, their own ID.

Database access request forms will be developed for every application and must be provided to the DBA section by an authorized agency representative in order to gain access to the Oracle database.

Other standards that apply to enterprise information systems statewide will be enforced on the mid-tier platform. Those standards include user number assignment and password standards.

It is the objective of any policy or guideline to prevent the intentional or unintentional modification, destruction or disclosure, or misuse of data and information technology resources.

For information on security related issues contact Mick Plovanic of the Computing Operations Bureau at 444-2571, ZIP!, or E-Mail to mplovanic@mt.gov. For Oracle DBA support contact Dave Howse of

Systems Development Support, at 444-1593, ZIP! or E-Mail to dhowse@mt.gov, or Tony Noble at 444-2922, ZIP! Or E-Mail to tnoble@mt.gov.

# Tape Management System Upgrade

A new release of the CA-1 Tape Management System (TMS) is about to be installed. This release (5.2) will provide many enhancements over previous releases. Most of these enhancements will be seen only by the tape librarians and operators but a few will affect the general TMS user.

## ACCODE PARAMETER

In addition to specifying data set retention by way of the JCL LABEL parameter, certain dates can be expressed using the JCL ACCODE parameter. (In our MVS operating system environment the ACCODE parameter is ignored for SL tapes but, with release 5.2, TMS will intercept this parameter to see if any of the following codes are supplied.)

Note: "x" can be any letter of the alphabet.

**ACCODE=xCAEXPDT** Specifies that the value specified in the JCL LABEL= parameter is a true expiration date and not a CA-1 EXPDT keyword.

**ACCODE=xCAKEYWD** Specifies that the value specified in the JCL LABEL= parameter is a CA-1 EXPDT keyword and not an explicit expiration date. This applies *only* if the value specified is a valid CA-1 EXPDT keyword value.

**ACCODE=xCACATLG** Same as LABEL=EXPDT=99000 or the CA-1 EXPDT keyword CATALOG or CATLG.

**ACCODE=xCANORES** Same as LABEL=EXPDT=98000 or the CA-1 EXPDT keyword FOREIGN.

**ACCODE=xCAPERM** Same as LABEL=EXPDT=99365 or 99366 or the CA-1 EXPDT keyword PERMANENT or PERM.



ACCODE=xCAUSER Same as  
LABEL=EXPDT=88000 or the CA-1 EXPDT  
keyword USER/000.

These are additions to the current CA-1 supported JCL, not changes. Therefore, any JCL currently in use will still be supported by the new CA-1 release.

### Realtime expiration date processing for MOD data sets.

For data sets created with DISP=MOD, CA-1 now uses the highest expiration date found between the existing Tape Management Catalog (TMC) information, the user JCL, or the CA-1 default retention (currently set to 5 days).



### Vault management

(While this is a librarian enhancement, it may be helpful for users to keep it in mind.) The new release of CA-1 will allow tape volumes to be automatically vaulted based on the number of days passed since the volume has been used. Look for a future article explaining this feature in more detail.

### Online CA-1 panels

The main inquiry panel of the TMS online system has a few more fields displayed. These pertain mainly to tape robotics which are currently not being used on the State of Montana mainframe. All fields from the 5.0 release of CA-1 are displayed in the 5.2 release panels.

The install of this new release is scheduled for some time in early April. Notifications will be distributed to all known mainframe users.

For more information contact Bill Ramsay of the Computing Operations Bureau at 444-2902, ZIP! or E-Mail to [bramsey@mt.gov](mailto:bramsey@mt.gov).

# OS/390

This is the first of a series of articles on the new functionality that will be available with the next release of MVS/ESA...which is now referred to as OS/390. OS/390 is really a group of IBM products which are packaged together. OS/390 includes standard IBM products such as MVS/ESA, ISPF, JES2, Language Compilers, SDSF, TCP/IP, TSO, VTAM. It also includes many new products which are not currently on the mainframe. These products are: Bookmanager Read; a family of DF/SMS products which include Network File Systems, Hierarchical File System, Hierarchical Storage

Manager (HSM); a family of TCP/IP products which include CICS Sockets, Kerberos DES, Network Print Facility, OpenEdition MVS Applications; LAN Server; LANRES; C/C++ compiler; VisualLift RTE; Open System Adapter Support facility (OSA/SF); SOMobjects; Softcopy print; VTAM AnyNet and a large family of OpenEdition products which include Application Services, System Services, DCE, and DCE DFS.

As mentioned in an earlier *News & Views* article, OS/390 conforms to X/OPEN XPG4 UNIX Specification (UNIX 95) branding. The OpenEdition Support of OS/390 will allow the transparent exchange of data, easy portability of applications and cross-network management of data and applications. Support has also been added for XPG4-compliant version of the UNIX-to-UNIX Copy Program (UUCP), a group of program directories and files that can be used to communicate with any UNIX system that is running a version of the UUCP. This function can be used to automatically transfer files and requests for command execution from one UUCP site to another. The OS/390 Internet BonusPak supplied by IBM will allow for the installation of a Web server on OS/390.

Technical Services is currently working on installing release 2 of OS/390 and integrating other vendor products with this new release. The majority of software (IBM and other vendor) installed on the new operating system will be YEAR 2000 compliant. IBM products upgraded in this new release are: DF/SMS DFP 1.3; GDDM 3.2; Highlevel Assembler 1.2; ISPF 4.2; JES2 5.2; MVS/ESA 5.2.2; SDSF 1.6; TSO/E 2.5; VTAM 4.3. Other vendor products which will be upgraded are: CA-1 5.2; CL/Supersession 1.47; CMF 5.2.2; Comparex 8.2; DMS/OS 9.0; MXG 14.14; and SyncSort 3.6. Some of these products will be put into production on the current operating system. Users will be notified in advance of these upgrades and any enhancements they introduce.

For more information contact Robin Anlian of the Computing Operations Bureau at 444-2898, ZIP!, or E-Mail to [ranlian@mt.gov](mailto:ranlian@mt.gov).

# Tech Talk

## NetConnect and WinFrame - ISD Offers a New Method of Remote Access

ISD is making a new method of remote connectivity available to end users. This capability is being provided through use of Netware Connect (to provide modem pool connectivity and Netware NDS authentication) and Citrix WinFrame servers (to provide centralized application services). This should be of interest to agencies that have employees who have a need for remote access to ZIP!Office, WordPerfect, Lotus 1-2-3, and Mainframe Access. Of particular note is the use of ZIP!Office, instead of Portable ZIP!, which provides a significant improvement in response time, ease of use, functionality, and reliability for e-mail. The applications run on the WinFrame server, with the same access to the NDS tree a user normally gets when logging into the network on an office PC.

Remote users are provided with client software (for

DOS, Windows 3.x, Windows 95, or Windows NT based home/portable PCs) that communicates via modem with an NT based WinFrame application server. The WinFrame client software allows users with limited hardware resources (as low as a 286 with DOS) to become WinFrame clients with reasonable performance. ISD is providing a centralized WinFrame server that allows usage of the above mentioned applications, or agencies can opt to install their own WinFrame servers to meet specific application needs. One function this service does **NOT** provide is remote control of a remote user's office or home PC. Users are instead strongly encouraged to move files from local drives to shared file servers which will not only make those files accessible through WinFrame, but provides backups on a regular basis.

Cost for these services is being implemented in two tiers. Agencies who are granted rights to the enterprise modem pool and/or NetWare Connect services will be charged \$10.00 per month per user. Agencies who choose to use the ISD WinFrame Application server will be charged an additional \$5.00 per month per user. These charges are designed to allow for recovery of the costs involved in providing telephone lines, modems, servers, software, administrative support, and help desk support 6:00 am to 10:00 pm M-F and on Saturday 8:00 am - noon. The phone number for the enterprise modem pool is a Helena local phone number. Any long distance charges are the responsibility of the user. To gain authorization to use the ISD NetConnect and/or WinFrame servers a Remote Access Form must be filled out and forwarded to the ISD Help Desk. That form is available from the ISD Help Desk via ZIP! (send a request for the form to WINFRAME USER) or at the end of this article. This form should be filled out and authorized by the appropriate Agency

Network  
Administrator and/  
or Supervisor, and  
forwarded to the  
ISD Help Desk at  
ZIP! (again to  
WINFRAME  
USER) or via

deadhead mail (ISD HELPDESK).

For further information on NetWare Connect/WinFrame remote access contact Pete Wiseman of Network Operating Systems Support at 444-9665 ([pwiseman@mt.gov](mailto:pwiseman@mt.gov)) or Denny Knapp of End User Systems Support at 444-2072 ([dknapp@mt.gov](mailto:dknapp@mt.gov)).

# New Services

# Remote Access Form

The following information is needed to setup remote access to the WinFrame server and your network. This information will be used to create your remote access account and security. **This form is to be completed by your network administrator. Your supervisor must authorize this request .** Your id will be set up within 10 working days or less after this form is received by the help desk. Your network administrator will be notified when your id has been activated and will arrange for you to receive the necessary client software and installation instructions. Confirmation will also be sent to the authorizing supervisor. Confirmation of this request initiates billing for the Remote Access connection (\$10.00 per month) and the Enterprise WinFrame Application services if requested (\$5.00 per month). Questions about completing this form can be directed to the ISD Help Desk at (406) 444-2000 or ZIP! at WINFRAME USER. Upon completion send this form to the ISD Help Desk at ZIP! (to WINFRAME USER) or via deadhead mail (ISD HELPDESK).

1. Name:

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2. Work phone:

---

3. Fully qualified Network Login ID (EG. CX9999.ISD.DOA.MT)

---

4. Preferred server:

---

5. Preferred tree:

---

6. ZIPOffice embase:

---

7. Agency Billing Number:

---

8.. Authorizing Supervisor:

Name 

---

Phone 

---

E-mail Address: 

---

9. Enterprise WinFrame Application services needed? ☐ YES ☐ NO

# Mainframe Dataset Names and PC File Transfers

When doing a file transfer (FTP) from a PC to the mainframe, it is necessary to pick a name for the mainframe dataset. This name must be no longer than 44 characters, and **must** begin with a valid ACF-Authorized first node. If the first node is **not** valid, the file transfer will not take place, and it also causes problems for the mainframe computer operators. The most commonly used first nodes for most users are their TSO LOGONID, SHARE, or their agency's node.

Examples are:

CZ0094.my.dataset	("CZ0094" is my LOGONID)
Share.our.data	("SHARE" allows <b>any</b> user to access to the data)
fnn.agency.data	("FNN" must be <b>your</b> agency's ID)

Also keep in mind that the entire dataset name must be enclosed in single quotes unless the profile of your TSO session is set to "NOPREFIX"

For more information contact Buzzy Buzwell of the Computing Operations Bureau at 444-2881, ZIP!, or E-Mail [bbuzwell@mt.gov](mailto:bbuzwell@mt.gov).

## ITMG Meeting

The Information Technology Managers Group meets the first Wednesday of the month to discuss issues of interest to the state IT community. The last meeting was March 5, 1997.

A draft Internet Home Page Development policy was circulated for the group's information and review. The policy will be discussed by the Information Technology Advisory Council at a future meeting. Feedback on the draft policy should be directed to agency directors or Linda Belflower of ISD's Computing Policy and Development Section at 444-1635, ZIP! , or E-Mail at [lbelflower@mt.gov](mailto:lbelflower@mt.gov).

The PC Maintenance Term Contract is scheduled to expire in June 1997. The need for this type of service being provided through an enterprise vehicle vs. being provided individually by agencies was discussed. ISD is still reviewing options.

The Electronic Document Management and Imaging Services (EDMIS) RFP has been issued. The goals of the RFP are to ensure the highest possible degree of compliance with state standards and laws governing records management; to preclude unnecessary work and duplication of effort by individual state agencies in the RFP/contract process; and to save money for the state by taking advantage of the economy of scale provided by working with a single contractor for all agencies' requirements.

Information on the PC Maintenance Term Contract or the EDMIS RFP should be referred to Brett Boutin of ISD's Computing Policy and Development Section at 444-0515, ZIP!, or E-Mail at [bboutin@mt.gov](mailto:bboutin@mt.gov).

Complete minutes of the ITMG meeting are available on the state BBS in the ISD conference (Advisory Groups) and the ISD Value Added Server (VAS) at `doa_vas_001\sysguest\itmginfo\minute97` or from Amanda Christen of ISD at 444-2700, ZIP!, or E-Mail at [achristen@mt.gov](mailto:achristen@mt.gov).

## Customer Support Center Adds Hours

The Customer Support Center is now resolving problems from 7 am until 10 pm. The expanded hours will better serve those working flexible hours, traveling employees using Portable ZIP!, or employees working from home.

*... resolving problems from  
7 am until 10 pm.*

The ISD Customer Support Center provides a central point of contact for customers to report all processing, data communications, maintenance and technology-related problems. **Please call 444-2000 to report all problems!** Unresolved problems are logged into an online problem tracking system to help with first-level problem determination. The logged data





helps ISD determine the source and extent of the problem, and any long-term fixes that are needed. If problems are not logged, valuable information for providing better service is lost. If the problem cannot be initially resolved by the Support Center staff, a priority is assigned and the problem is transferred to the appropriate staff in ISD for resolution.

The Customer Support Center also coordinates all adds, moves and changes to the data network as well as all SummitNet installations.

For more information about the Customer Support Center, contact Barbara Sheline of the Telecommunications Bureau at 444-4909, ZIP!, or E-Mail at [bsheline@mt.gov](mailto:bsheline@mt.gov).

## ZIP!Tips

### Sending Files from WordPerfect in a WIN95 Environment

The migration from Windows 3.1 to WIN95 is relatively painless for most users. The worst thing when moving to a new product is finding that a handy function once used under v3.1 no longer works in WIN95. One particular complaint reported is that the "Send" feature in WordPerfect 6.1 for Windows does not work.

In the v3.1 environment, after working on a file in WordPerfect, you could ZIP! it to someone else by clicking on **File, Send** from WordPerfect's Toolbar. This would display the ZIP!Office addressing screen and allow you to send the file directly out of WordPerfect. If this is attempted under WIN95, the following error is reported "Cannot find the program wbtrcall.dll". There is a "fix" to this problem.

The needed file wbtrcall.dll is located on the network where your ZIP! code is stored in the !APNCODE subdirectory (ie., \ZIP0XXax\!APNCODE). Copy this file to your local Windows subdirectory (C:\WINDOWS or C:\WIN95) by opening Explorer

and going to the above mentioned path. Highlight the wbtrcall.dll file, click your right mouse button and select **Copy**. Next, go to your C:\ drive and highlight the Windows (or WIN95 whichever is the case) subdirectory, click your right mouse button and select **Paste**. Since this file is now in your C:\Windows or C:\WIN95 path, WordPerfect can access it and accomplish the "Send" function.

An important thing to consider is if the recipient getting the file is a WordPerfect 6.1 user. If not, you'll need to save the file in WordPerfect 5.1 format BEFORE you send it.

If you have any questions on sending E-Mail directly out of WordPerfect 6.1 for Windows, or any other ZIP! questions, please contact Sue Skuletich of End User Systems Support at 444-1392, ZIP! or E-Mail to [sskuletich@mt.gov](mailto:sskuletich@mt.gov).

## Portable ZIP!Office Mail Exchange Failure

The last Portable ZIP!Office article detailed the CONNECTION FAILED error. There is another error message which may be received that also warrants attention. That message is MAIL EXCHANGE FAILED.

This error will appear after the acknowledgment message CONNECTION ESTABLISHED. Remembering the article about the CONNECTION FAILED message, you can deduce that you have advanced a little further in the process but you are still not successful in uploading/downloading mail. The

message MAIL EXCHANGE FAILED means that ZIP006, the server responsible for answering your phone call, is not able to talk to your Home System. Home System refers to the Novell Netware fileserver wired into the backbone communications network. It

is probably located somewhere in or near your office. The Home System houses your ZIP!Office In-tray from which you will download your mail into your **Portable** ZIP!Office In-tray. Home System is synonymous with the commonly used Phrase "The Server".

A very important factor in determining what is causing the MAIL EXCHANGE FAILED error is that you must know what your E-Mail address is on your Home System. This can be easily concluded by referencing your name in the REGULAR ADDRESS BOOK in ZIP!Office. While in ZIP! click File, Open, Regular Address book. Type your last name. ZIP! searches for your name as you type each letter. Once your name is highlighted, press the Enter key. The Address book details window will display information and your address is included. Make sure the address in the address book is exactly what you have typed into the Portable ZIP!Office - Sign-on window.

If the information on the Sign-on window is correct the problem may be that connectivity has been lost to the Home System. The ISD HELP DESK (444-2000) is the number to call in the next phase of your attempt. Tell the technician that you are getting a MAIL EXCHANGE FAILED message when using Portable ZIP!Office. Also tell them what your E-Mail address is on your Home System. This will be either ZIP02 or ZIP003-ZIP008. If your next attempt to retrieve your mail fails, it's probably time to check in with your LAN Administrator to see if the server is having any difficulties.

Follow these steps and the problem will most likely be solved. For more information on Portable ZIP!Office contact Candace Hastings of End User Systems Support at 444-2858, ZIP!, or E-Mail to [chastings@mt.gov](mailto:chastings@mt.gov).

## Run a Windows 95 ScreenSaver Anytime!

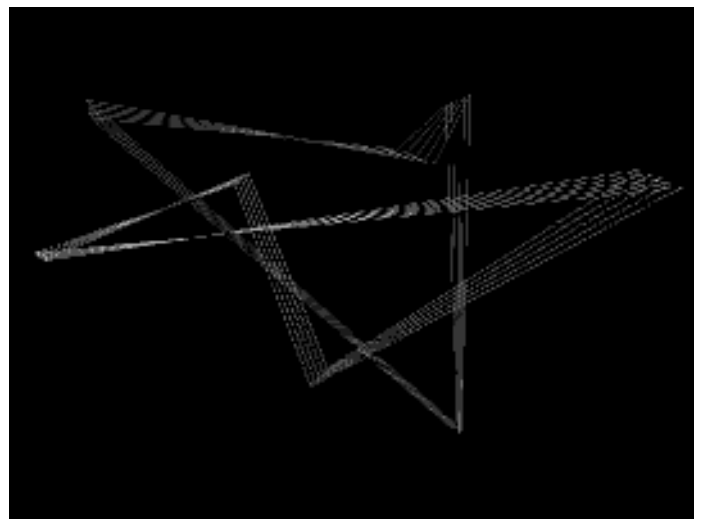
Have you ever needed to leave your PC unattended with confidential information on the screen, and you didn't have time to wait until the screen saver went into effect? Read on to learn how to invoke the screen saver anytime you wish.

Many people don't know that most screensavers are just executable files, perhaps with one or more data files. What does this mean to you? If you would like to run a specific screensaver just by double-clicking an icon, then simply make a shortcut to a screensaver's .SCR file. Double-clicking the icon will run the screensaver just as if it had been activated normally. Note that this trick only works with .SCR-format screensavers, and not, unfortunately, AfterDark© or compatible screensavers. Also note that, in order for some screensavers to work, you may need to add the command-line option "/s" at the end of the executable name. And if you don't know how to make a shortcut...

Right-click the mouse on any open area on the desktop. Choose "New." Choose "Shortcut." Choose "Browse," and browse your WINDOWS and WINDOWS\SYSTEM directory for .SCR files. Choose one. Click "Next." Give the shortcut a name, such as "Double-Click to activate screensaver." Click on "Finish." You're done!

This tip was obtained from *Malek's Win95 Tips Page* located at <http://ourworld.compuserve.com/homepages/admalek/tips.htm>.

For more information, contact Irvin Vavruska of End User Systems Support at 444-6870, ZIP!, or E-Mail at [ivavruska@mt.gov](mailto:ivavruska@mt.gov).



# WordPerfect TECH Tip: Quick Correct Missing?

If you are using WP6.1 and your Quick Correct is no longer available or the selection is grayed out the following may help you resolve this problem.

First move the mouse just past the help option and right click. A pop up will appear identifying which tool bar is being used. If the check is by <WPWin 6.0a Menu>, then click on <WPWin 6.1 Menu>. If the check mark is next to Wpwin 6.1 Menu, then delete the *standard.wpt* in the users directory.



If this does not solve the problem, rename the WPOC60US.DAT file and run the QCSETUP.WCM macro. This should allow the feature to be set up properly.

For more information or questions contact Jerry Kozak of End User Support at 444-2907, ZIP!, or E-Mail at jkozak@mt.gov.

## Building Reports in Approach 3.0

Approach contains powerful report building capabilities. You can create a basic report using only a few clicks of the Mouse. Once you have your database created and some data entered, create a report just by clicking on the Create, Report. Approach will then open up a dialog box where you can choose the style of Report (appearance) and which type of report you wish to create:

- ☐ **Blank.** The Report form is Blank and the user is required to place all fields on the report. (This is for advanced users)
- ☐ **Columnar.** All of the data is presented in a column format.

- ☐ **Standard.** The data is present on the report in a record by record format. This format takes the greatest amount of space both in number of pages and in actual physical size.
- ☐ **Leading Grouped Summary and Trailing Grouped Summaries.** These are used where your data contains a field which contains duplicate entries. The data is then broken into groups based upon the duplicate entry. For example: in each of your records you have the fields Agency, Division, Bureau, Employee ID and Address. If you used a Grouped Summary then each list of employees could be broken out by Agency, then by Division and then by Bureau.
- ☐ **Grand Total.** This totals your columns and then presents you with a grand total.
- ☐ **Summary.** This will create a report which contains only the summary values for each of the fields you choose.

Each of these basic report selections give you a different view of your data.

The following section will step you through creating a basic report using a **Blank** report. Each of the report selections above can be modified using these procedures.

- 1<sup>st</sup>. Choose *Report, Create* and click on *Blank*, use the default style. The blank report which is created will contain only the body "band". The body contains the fields which you select to place on your report. You will also see the add field box. And the design tool bar.

# APPROACH

To place a field on your report, click on the field you want included and drag it to the body of the report. Release the button when you have it in place. What you will notice is that you now have multiple lines of data which correspond to the field you placed on your report. If you click in the column where you placed your field the entire column is selected. If you click in the right margin you can select and see each individual row on the report.

Add several fields to your report, dragging and dropping them. If you drop a column in a location where you did not want it, or you wish to change the order of the columns, place the cursor on the column you wish to relocate then click and drag to its new location. If you wish to delete a column, click on the column to select it and then press the delete key.

your header. Next locate the floating tool-bar. If it is not visible, make sure that the Show Drawing Tools under View is selected. Click the *ABC* button on the drawing tools tool-bar. Move the cursor to the Header “band”, press click and drag your I-beam cursor to create a text box size. Release and type your report title. Select Object, Style and Properties; a box will appear to change the font, color, line style, or text justification. If you select the text object, position it in a different location within your Header. A Footer is created in the same manner as a Header only choose Report, Add Footer. Add column headings to describe the data.

- 4<sup>th</sup> Click on the Header and choose *text tool* again. Click and drag the I-beam cursor to create a text box to contain the heading for your column. Type the column title. Repeat this procedure for each of the columns you wish to title. You may have noticed that your titles are not aligned to each other. You can either manually drag the titles into alignment, allowing them to snap to the grid (position themselves automatically based upon the dotted grid pattern) or you can select all of the titles. Press and hold the shift key while clicking on each of column titles. Multiple objects are now selected. Choose *Object*, Click *Align* then choose to each other, horizontal is none, and vertical is either center or bottom. Center will align your selected objects based upon an imaginary center common to all of the objects, bottom will align all of the bottom of the selected objects.

We have now created a basic report which contains: columns of data, a header which contains a date and a title, column titles and a footer if you chose to do so. We have now completed our basic report. I will include future articles which will detail additional aspects of building reports using Lotus Approach.

- 2<sup>nd</sup> You have now placed the fields on your report. If you wish, you can print it now, but you have no column headings or a title. All you have is a columnar report of your selected data. Click on your report in an area which contains no columns or until you see the word report on your menu bar. If you click on report you will see more selections. We are first going to add a header. Click *Report*, *Add Header*.

You will notice that you have now added another “band” called Header. It is an outlined region at the top of your report. If you click in the header “band” you will notice the word Panel is now on the menu bar. Click *Panel*, select *Insert* (a flyout menu will appear which says Date, Time, and Page #. Field will be grayed out). Click on *Date*. This will insert a date box into the header which appears at the top of each page. The date box is an object. If you select the date box you can move it to a different location in the Header “band” or change its style (color, font, or outlines).

- 3<sup>rd</sup> We will now place a title in our header “band”. Click on *Header*. You will notice that your header band has an outline. Move the mouse slowly toward the bottom of the outline until the cursor changes into a double headed arrow. Press the left button and drag the outline a few rows toward the bottom of your report. This increases the size of

If you need any assistance using Lotus Approach or have questions regarding this article please contact Brian Divine of Desktop, LAN Administration Support at 444-2791, ZIP!, or E-Mail [bdivine@mt.gov](mailto:bdivine@mt.gov).



# Windows Tips of the Month

## Toggle key Tone

Don't you hate it when you hit the Caps Lock or Num Lock key by mistake? Windows 95's Accessibility options can keep them from sneaking up on you. Open the Control Panel, choose Accessibility Options and select Use Toggle Keys. Click OK, and now if you hit Caps Lock or Num Lock, you'll hear a warning tone.



## Registry Backup

All sorts of installation programs can adversely affect the Windows 95 Registry, so it's a good idea to make regular backup copies of the two files, **user.dat** and **system.dat**. Unfortunately, you can't use Explorer or DOS to copy these files. Buried on the Windows 95 installation CD-ROM is a program that lets you make up to nine backups of your Registry. Just copy **Cfgback.exe** from the CD-ROM's \Other\Misc\Cfgback folder to c:\windows, and then copy the **Cfgback.hlp** file to c:\windows\help. To make a backup, double-click **Cfgback.exe** and follow the detailed instructions. If you don't have access to a Win95 CD the CFGBACKfiles are available on the ISD Value Added Server at \guest\windows\winaddon\95addons\cfgback.

If you have questions or comments about this article contact Denny Knapp of End User support at 444-2072, ZIP!, or E-Mail at [dknapp@mt.gov](mailto:dknapp@mt.gov).

## E-Mail RFP Update

Last month's *News & Views* described the two RFPs being issued for replacing the state's E-Mail system (ZIP!Mail, ZIP!Office, EMC<sup>2</sup>/TAO). RFP #1 is

intended to select the product and the accompanying strategic vendor. This RFP was released on January 29th, proposals are currently being reviewed, and the Intent to Award date is May 5th. RFP #2 is for deployment assistance and will be released immediately after RFP #1 is awarded.

RFP #2 focuses on assistance in designing the messaging architecture, assistance in deploying the main messaging infrastructure, and potentially, assistance in deploying the client software.

This last area, deploying the client software, requires feedback from the agencies. A survey is being directed to the ITMG managers polling their thoughts on what is needed for E-Mail/groupware client deployment and support. The survey was E-Mailed in early April and responses are due in mid-April.

If you have any questions concerning the survey or the E-Mail/groupware process in general, contact Terry Kramer of End User Systems Support at 444-2556, ZIP!, or E-Mail at [tkramer@mt.gov](mailto:tkramer@mt.gov).

## Training Calendar

This schedule has been assembled by the Helena College of Technology of the University of Montana. If you have any questions about enrollment, please call 444-6821. All classes will be held at the Helena College of Technology at 1115 N. Roberts. Please note that these costs are subject to change each July 1st.

To enroll in a class, **you must send or deadhead an enrollment application** to the State Training Center, HCT, Helena, MT 59601. If you have questions about enrollment, please call 444-6821. *Once you enroll in a class, the full fee will be charged UNLESS you cancel at least three business days before the first day of class.* HCT is also willing to schedule specific classes by request from state agencies.

## Training News

		Dates	Cost	Length
Data Base	Intro. To Oracle <i>Prereq. Intro to Windows</i>	Apr. 14,15	170.00	2.0
	Intro. To SQL <i>Prereq. Intro to Oracle</i>	Apr. 21,22	170.00	2.0
	Oracle Developer 2000, Part I <i>Prereq. Intro to SQL</i>	Apr. 28-30	255.00	3.0
	PL/SQL Programming <i>Prereq. Oracle Developer 2000, Part I</i>	May 5,6	170.00	2.0
	Oracle Developer 2000, Part II <i>Prereq. PL/SQL Programming</i>	May 12-14	255.00	3.0
	Oracle Designer 2000	Mar. 31-Apr. 11**	425.00*	5.0
	Lotus Approach <i>Prereq Intro to Windows</i>	Apr. 14, Jun. 10	85.00	1.0
	Inter. Lotus Approach <i>Prereq. Lotus Approach</i>	Apr. 28, Jun. 19	85.00	1.0
Data Network/ Mainframe	Novell NetWare 4.1	May 19-23	425.00*	5.0
	TSO/SPF	May 7	85.00	1.0
	JCL	May 15,16	170.00	2.0
	ADS/O	May 21-23	255.00	3.0
	Paladrone	May 13,14	~500.00	2.0
Microcomputer	Introduction to Windows	Apr. 2,3 (1-4:30) May 1 June 4	85.00	1.0
	Windows 95 Conv. <i>Prereq. familiar with Windows</i>	Apr. 16 am Jun. 5 am	42.50	0.5
	Windows 95	Apr.9 May 7	85.00	1.0
	ZIP!Office <i>Prereq. Intro to Windows</i>	Apr. 10 pm May 29 am Jun. 18 am	Free	.33
	Intro. to Internet <i>Prereq. Intro to Windows</i>	Apr.1 pm May 20 am Jun. 13 am	42.50	0.5
	Internet <i>Prereq. Intro to Windows</i>	Apr. 17,18	170.00	2.0
	HTML	Apr. 29,30 Jun 16,17	170.00	2.0
	WordPerfect 6.1 for Windows <i>Prereq. Intro to Windows</i>	Apr. 23,24 Jun 11,12	170.00	2.0
	WordPerfect 6.1 Conv.Windows <i>Prereq. Intro to Windows</i>	May 8	85.00	1.0
	WP 6.1 Tables & Merge <i>Prereq. WP 6.1 Conv</i>	Apr. 23 am	42.50	0.5
	Lotus for Windows <i>Prereq. Intro to Windows</i>	Apr. 10,11 Jun. 25,26	170.00	2.0
	Lotus Conv. for Windows <i>Prereq. Intro to Windows</i>	May 28	85.00	1.0

Prerequisites may be met with consent of Instructor.

\*Plus Materials

\*\*half days

# ISD Class Enrollment Application

**COMPLETE THIS APPLICATION IN FULL AND RETURN  
IT AT LEAST ONE WEEK PRIOR TO THE FIRST DAY OF CLASS**

## COURSE DATA

Course Request: \_\_\_\_\_

Date Offered: \_\_\_\_\_

## STUDENT DATA

Name: \_\_\_\_\_

Soc. Sec. Number (for P/P/P): \_\_\_\_\_

Agency & Division: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Phone: \_\_\_\_\_

How have you met the required prerequisites for this course? Explain, giving the class(s) taken, tutorial completed, and/or experience.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## BILLING INFORMATION/AUTHORIZATION MANDATORY

User ID: \_ \_ \_ \_ \_

Agency#: \_ \_ \_ \_

Authorized Signature: \_\_\_\_\_

Enrollment Application

**FULL CLASS FEE WILL BE BILLED TO THE REGISTRANT UNLESS  
CANCELLATION IS MADE THREE BUSINESS DAYS BEFORE  
THE START DATE OF THE CLASS.**

**DEADHEAD COMPLETED FORM TO:**  
COMPUTER TRAINING CENTER  
HELENA COLLEGE OF TECHNOLOGY  
OF THE UNIVERSITY OF MONTANA  
PHONE 444-6800 FAX 444-6892

# DeadHead BACK



**Department of Admin  
Information Services  
Division**

## Editor's Notes

### *Published By...*

ISD *News & Views* is published monthly by the Information Services Division (ISD), Department of Administration, Room 229, Mitchell Building, Helena, MT 59620, 406/444-2700, FAX 406/444-2701.

This newsletter is dedicated to educating and informing the reader with pertinent State technology news. Materials may be reproduced without permission. Alternative accessible formats of this document will be provided upon request.

### *Editorial Submissions...*

To submit an article to ISD *News & Views* for publication, please send it to Trapper Badovinac, preferably via ZIP!. Please have your article in by the 8th of the month for inclusion in the following month's newsletter.

### *ISD Customer Support Center...*

Have a problem (opportunity)? Do you need ISD assistance for any of your information processing requirements? Then contact the ISD Customer Support Center (444-2000), which is our central point of contact.

### *Subscription Services...*

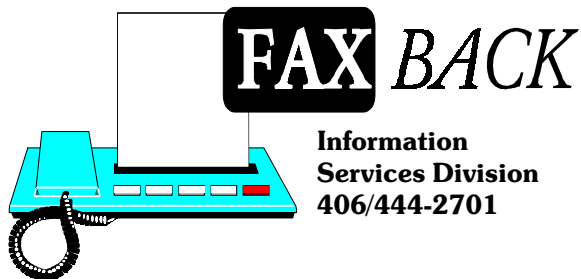
ISD *News & Views* is a free publication. If your name or address is incorrect, please send your current mailing label along with any corrections to Trapper Badovinac. If you would like to be added to our mailing list, let us know your name, agency, division/bureau, phone, address, city, state, zipcode, and whether you would like your newsletter to be distributed via ISD Box #, Deadhead, or Mail. ISD *News & Views* is also available electronically via ZIP!/ZIP!Office or VAX E-Mail. Current and back issues are located on the State of Montana Electronic Bulletin Board System (444-5648 local & out-of-state, or 800/962-1729 toll free in Montana) and on ISD's Value Added Server (\GUEST\N&V).

### *Distribution Notes...*

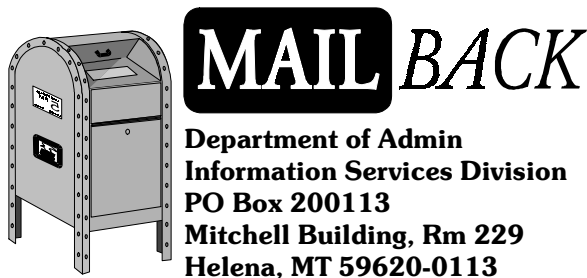
1200 copies of this public document were printed at a cost of \$360. Distribution costs are \$18.25. 120 copies of this document were distributed electronically at no cost.

### *Editor*

Trapper Badovinac (444-4917), ZIP! or E-Mail at [tbadovinac@mt.gov](mailto:tbadovinac@mt.gov).



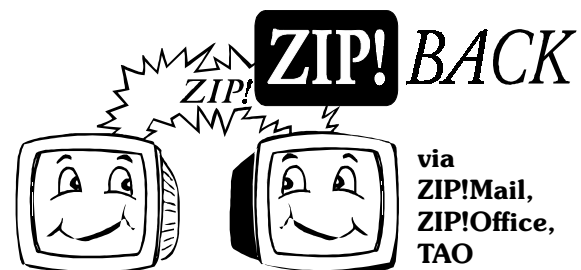
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